Archives of Disease in Childhood 1995; 73: 472–475

CURRENT TOPIC

Cognitive behaviour therapy in children and adolescents

Carole A Kaplan, Anne E Thompson, Sheila M Searson

The term cognitive behaviour therapy describes a group of psychotherapeutic techniques in which psychological distress and maladaptive behaviour are treated by changing a patient's style of thinking and behaviour. Cognitive behaviour therapy is now used with increasing frequency in the treatment of children and adolescents who present with emotional and behavioural difficulties and formal psychiatric disorder. This article reviews publications in this field and offers comments on clinical issues.

Theory

(A) ABNORMALITIES OF COGNITIVE FUNCTIONING IN CHILDREN

The literature provides good evidence that children with various forms of psychopathology process information in abnormal ways.[1] These abnormalities of cognitive functioning can be regarded as either cognitive deficits – that is, a failure to apply thinking strategies in situations where this would be adaptive, or cognitive distortions – that is, information processing which takes place in a biased or dysfunctional manner.[2] Distortion may result from errors in judgments made about events, or as a result of well established but maladaptive belief systems (sometimes called schemata).

(B) COGNITIVE BEHAVIOUR THERAPY AS A GENERIC TERM

Cognitive behaviour therapy is not a single intervention but a hybrid of strategies for cognitive, behavioural, emotional, and social change. Examples of interventions aimed at correcting cognitive deficits include the teaching of social skills through role play, problem solving techniques and training in verbally mediated self control. The most widely known example of an approach to the correction of cognitive distortions is derived from the work of Aaron Beck.[3] He has proposed that an individual's appraisal of and beliefs about an event are examined and alternative ways of regarding the experience are proposed with the aim of altering the resulting feelings and behaviour.

(C) MECHANISMS OF CHANGE IN COGNITIVE BEHAVIOUR THERAPY

The most extensive research into the processes by which cognitive behaviour therapy brings about change has been concentrated on treatment in adults. This work suggests that cognitive behaviour therapy has a specific effect over and above elements common to all psychotherapies such as an intense confiding relationship occurring in a healing setting.[4]

One important premise of cognitive behaviour therapy is that change brought about by techniques first practised in therapy sessions will generalise to other situations, to other domains of functioning and over time. Research work has confirmed these findings.[5]

(D) DEVELOPMENTAL ISSUES

In children, cognitive behaviour therapy should always take place in the context of a child's level of cognitive development. Therapists need an understanding of the processes of normal psychological development, as well as an assessment of their patient's level of cognitive functioning, which is not necessarily congruent with chronological age. A variety of psychological research shows that in general, children acquire a more mature style of self control,[6] self evaluation,[7] and emotional recognition[8] in middle childhood. However, psychological, emotional, and social developmental processes all continue throughout adolescence.

There is some evidence that the effectiveness of cognitive behaviour therapy is influenced by a child's level of cognitive development.[9] Mental handicap has not, however, precluded the use of cognitive behaviour therapy in the treatment of emotional disorders in adults.[10]

(E) OUTCOME RESEARCH

Evaluation of the effectiveness of all forms of psychotherapy in children is a complex and difficult task. Research into cognitive behaviour therapy in children has not yet produced robust outcome studies.[11] In general, research lacks adequate specification concerning the details, methods, and quality of therapeutic techniques used. Published work has often failed to use appropriate control groups and does not provide long term follow up data. Therapeutic techniques have often been applied in research settings to non-clinical samples of children, thus producing outcome data of questionable clinical relevance.

Fleming Nuffield Unit, Burdon Terrace, Jesmond, Newcastle upon Tyne NE2 3AE
C A Kaplan
A E Thompson

Marion Family Centre, Darlington Memorial Hospital
S M Searson

Correspondence to:
Dr Kaplan.

Practice

(A) THERAPY IN CONTEXT

The decision to treat a child with cognitive behaviour therapy should be made after a thorough clinical assessment which gathers information about a child's emotions, behaviour, relationships, family, school, and friendships. The assessment procedure may provide the therapist with examples of the way in which the child thinks and feels. A number of assessment tools are also available which can provide further information about a child's cognitive images, thought processes, and underlying schemata.[12–14] This material, specific to each child, forms the elements on which treatment is based. Therapists require training and clinical judgment to select the appropriate material to use.

(B) ESTABLISHING A THERAPEUTIC ALLIANCE

All forms of psychotherapy depend on a trusting therapeutic relationship and cognitive behaviour therapy is no exception. The style of interaction between therapist and child in cognitive behaviour therapy is one of active collaboration. The therapist needs to establish this style from the beginning. Children and young people may have been brought unwillingly – and sometimes unknowingly – to the clinic. The therapist can use a child's thoughts and feelings about this to commence exploration of their perceptions of themselves and the world and to create a working alliance.

(C) THE PROCESS OF THERAPY

Cognitive behaviour therapy tends to be delivered in a series of sessions, usually between eight and 12, with increasing intervals between sessions to allow new techniques to be explored or practised. The ability to suggest a 'package' of therapy in this way enables families to have a clear appreciation about what will be involved in the process of therapy.

Sessions need to be tailored to the child's ability and may be short. Sessions are clearly structured and begin with the setting of an agenda centred around a mutually agreed problem list. The therapist and child may then move on to review homework tasks, examine thoughts and feelings surrounding recent events, or learn and practice new cognitive techniques or behavioural strategies.

The therapist uses clinical judgment based on information from the detailed assessment to select an approach that is likely to make some change in existing patterns of thoughts, feelings, and behaviours of the child. The particular technique chosen should take into account the child's capacity for memory, literacy, self evaluation, empathy, and self control. Many techniques involve the use of written material including information sheets and diaries. These tools are especially appropriate to the level of cognitive development in middle childhood.

Some therapeutic approaches are offered to the child in the form of experiments or hypotheses. The child is encouraged to attempt the manoeuvre and report the result, whatever it may be. For example, a depressed, inactive child may be asked to try doing a small activity they used to enjoy and report how they felt after the task. Another strategy is for the therapist to teach specific techniques to the child such as the use of 'self statements'. For example an anxious child may be encouraged to say to themselves 'this is a bit scary but it's okay'.

(D) THE ROLE OF PARENTS

Parents inevitably influence a child's cognitive development by modelling ways of thinking and behaving. Family assessments sometimes show that children's cognitive deficits or distortions reflect limited parental capabilities or maladaptive parental world views. If this is the case, treating a child in isolation may have limited impact.

Cognitive behaviour therapy in children should be augmented by the use of parents or carers as co-therapists. This emphasises that a child's difficulties are a joint problem to be tackled in partnership with families. Parents can be educated in the cognitive behaviour techniques being used with their child and encouraged to offer positive feedback to their child when he or she attempts to apply them at home.

Specific syndromes

(A) DEPRESSION

Childhood depression is more common than was previously appreciated and carries a significant morbidity and mortality.[15] The effectiveness of antidepressant medication in depressed children and adolescents has not been established and a small number of sudden deaths of children taking antidepressants have been reported.[16] Alternative effective therapies are needed and cognitive behaviour therapy has shown early promise.

Depressed children tend to have negative views about themselves, the world, and the future.[13] They may distort information in a way which leads to self deprecation and hopelessness.[17] Cognitive behaviour techniques such as the identification of dysfunctional thoughts followed by the generation of alternatives could be useful to deal with unrealistically negative views or distorted information processing.

Although depressed children show poor social interactions, this appears to be the result of poor motivation to use existing social skills rather than deficits in social behaviour.[18] This recent theoretical finding suggests that social skills training, previously proposed as a cognitive behavioural treatment for depressed children, may have limited impact.

The literature contains reports of various forms of cognitive behaviour therapy with small groups of depressed children.[19–21] Treatment outcome has yet to be evaluated in large scale trials. Potential mechanisms of change in depressed children treated with cognitive behaviour therapy also remain unexplored.

(B) ANXIETY

Several studies have suggested that cognitive behaviour therapy may be more effective and longer lasting than behaviour therapy or psychopharmacology for generalised anxiety disorder in adults.[22] This raises the question of whether this approach will prove similarly valuable in the treatment of children.

Highly anxious children anticipate failure in future performance and are excessively fearful of negative evaluation by others.[23] They attempt to face anxiety provoking situations by silently rehearsing reassuring phrases but this way of thinking tends to be excessive and unhelpful.[24] They may also misinterpret the somatic symptoms of anxiety as life threatening, thus reinforcing their anxiety state. Cognitive behavioural techniques would appear to be potentially useful in addressing these maladaptive cognitions.

A number of cognitive behavioural techniques used in the treatment of adults with anxiety disorders have been adapted for children, including educational approaches, relaxation training, modelling coping behaviours in feared situations, and the teaching of positive self statements. There is evidence that combinations of techniques have more impact than single strategies and that this form of treatment in children produces substantial reductions in anxiety symptoms.[25]

(C) ATTENTION DEFICIT HYPERACTIVITY DISORDER

Attention deficit hyperactivity disorder (ADHD) is associated with educational failure, disrupted social relationships, and ongoing behaviour problems. Stimulant medication is recognised to control some facets of difficult behaviour in some children with ADHD. However, not all children respond to or tolerate the treatment and there are potentially significant side effects of long term amphetamine use.[26] More uniformly effective, safe treatments for this serious condition would be welcomed.

Children with ADHD show prominent cognitive deficits including deficiencies in overall self regulation,[27] difficulties with sophisticated problem solving,[28] and poor adaptation of behaviour to suit environmental demands.[29] These findings led to hopes that cognitive behaviour therapy would be a potent intervention in the treatment of ADHD. Unfortunately results to date have not been encouraging.

The literature shows that cognitive behaviour techniques are mainly effective in moderating impulsivity and do not have an impact on other behaviours such as restlessness and distractibility.[30] Some studies have failed to show a beneficial impact of cognitive behaviour therapy on any of the problematic areas evaluated.[31]

(D) AGGRESSION

Aggression in children tends to be a relatively stable attribute which predisposes children to antisocial personality disorder[32] and substance misuse[33] in later life. Successful interventions would reduce immediate and long term morbidity.

Aggressive children show a variety of cognitive deficits and distortions. These include the inaccurate labelling of affect,[34] imperfect problem solving strategies,[35] and the ready perception of hostile intentions in the behaviour of others.[5]

Research in the United States has demonstrated promising short and long term benefits from the application of cognitive behaviour therapy such as problem solving training and anger control programmes for aggressive children and adolescents. Successful treatment has taken place in residential settings, sometimes over long periods.[36 37] Reports of this work have raised hopes of altering the potentially poor prognosis of aggressive children. However, the effectiveness of these techniques when applied in less specialised treatment facilities is yet to be determined.

(E) EATING DISORDERS

The treatment of children and adolescents with anorexia nervosa and bulimia nervosa usually includes a behaviourally oriented programme to normalise eating patterns, family work, and some form of individual psychotherapy for the child. Following the trends evident in the treatment of adult sufferers, cognitive behaviour therapy is frequently the psychotherapy of choice.

Young people and children suffering from anorexia nervosa typically have rigid 'black and white' thinking and a variety of distorted thinking patterns. These maintain their preoccupations with food and weight and contribute towards low self esteem.[38] Adolescents with bulimia nervosa have similar intense preoccupation with food, weight, and an ideal body shape. Dysfunctional thinking and altered mood states may trigger binges. Cognitive behaviour therapy aims to challenge dysfunctional thinking patterns.

Cognitive behaviour therapy similar to that described in the treatment of adults suffering from anorexia nervosa[39] and bulimia nervosa[40] is often applied in the treatment of children and adolescents. However, the extent to which these techniques contribute towards the effectiveness of multimodal treatment packages remains undetermined.

Conclusions

Cognitive behaviour therapy is particularly suited to the treatment of children and adolescents for a number of reasons. In contrast to some therapies, the explicit aims, agendas, and collaborative techniques of cognitive behaviour therapy may help in the initial engagement of both the child and their family. The process of cognitive behaviour models a facilitating relationship with an adult which may be particularly important for children who have previously had poor quality relationships with adults.[41] The use of

developmentally appropriate tasks and challenges encourages healthy cognitive development of children.

Our clinical experience suggests that children who benefit from cognitive behaviour therapy may remember techniques and apply them when facing future problems. This raises the interesting possibility that successful cognitive behaviour therapy may equip a child with a degree of resilience with which to face further adversity. For those children who do respond, the long term impact of cognitive behaviour therapy on the natural history of emotional and behavioural disorders in children remains unknown from a research perspective.

Cognitive behaviour therapy with children and adolescents does have a number of limitations. A minimum level of cognitive skills is required and the treatment is most suitable for those in mid-childhood and older. Even among older children, not all respond well to cognitive behaviour therapy. As yet, little is known about the characteristics of children who are non-responders.

Lastly, the need for adequate training and ongoing supervision for therapists practising cognitive behaviour therapy must not be underestimated. Descriptions of therapeutic techniques available in the literature may give the impression that cognitive behaviour therapy is a 'cook book' therapy which anyone can administer. In fact considerable skills are required to assess and treat a child using cognitive behaviour therapy, and the effectiveness of treatment increases with the experience of the therapist.

Taking into account information from current research, the advantages and the limitations of cognitive behaviour therapy in children, this style of treatment should be viewed as a potentially valuable treatment modality for some childhood psychiatric disorders.

1 Spence SH. Practitioner review: cognitive therapy with children and adolescents: from theory to practice. *J Child Psychol Psychiatry* 1994; **35:** 1191–228.
2 Kendall PC. Toward a cognitive-behavioral model of child psychopathology and critique of related interventions. *J Abnorm Child Psychol* 1985; **13:** 357–72.
3 Beck AT. *Cognitive therapy and the emotional disorders.* Madison, CT: International Universities Press, 1976.
4 Clare AW. Individual psychotherapies. In: Kendell RE, Zealley AK, eds. *Companion to psychiatric studies.* 4th Ed. Edinburgh: Churchill Livingstone, 1988: 727.
5 Kendall PC, Lochman J. Cognitive-behavioral therapies. In: Rutter M, Hersov L, Taylor E, eds. *Child and adolescent psychiatry.* 3rd Ed. Oxford: Blackwell Scientific Publications, 1994: 844–57.
6 Luria AR. *The role of speech in the regulation of normal and abnormal behavior.* New York: Leveright, 1961.
7 Mullener N, Laird JD. Some developmental changes in the organisation of self-evaluations. *Developmental Psychology* 1971; **5:** 233–6.
8 Harris PL, Olthof T, Terwogt MM. Children's knowledge of emotions. *J Child Psychol Psychiatry* 1981; **22:** 247–61.
9 Durlak JA, Furhman T, Lampam C. Effectiveness of cognitive-behaviour therapy for maladapting children: a meta-analysis. *Psychol Bull* 1991; **110:** 204–14.
10 Lindsay WR, Baty FJ, Michie AM. A comparison of anxiety treatments with adults who have moderate and severe mental retardation. *Res Dev Disabil* 1989; **10:** 129–40.
11 Hobbs SA, Moguin LE, Tyroler M, Lahey BB. Cognitive behavior therapy with children: has clinical utility been demonstrated? *Psychol Bull* 1980; **87:** 147–65.
12 Spivack G, Shure MB. *Social adjustment of young children. A cognitive approach to solving real life problems.* London: Jossey Bass, 1974.
13 Leitenberg H, Yost LW, Carroll-Wilson M. Negative cognitive errors in children: questionnaire development, normative data, and comparisons between children with and without self-reported symptoms of depression, low self esteem and evaluation anxiety. *J Consult Clin Psychol* 1986; **54:** 528–36.
14 Kazdin AE, Rodgers A, Colbus D. The hopelessness scale for children: psychometric characteristics and concurrent validity. *J Consult Clin Psychol* 1986; **54:** 241–5.
15 Harrington RC. Depressive disorder in children and adolescents. *Br J Hosp Med* 1990; **43:** 108–12.
16 Kaplan CA, Hussain S. Use of drugs in child and adolescent psychiatry. *Br J Psychiatry* 1995; **166:** 291–8.
17 Kaslow NJ, Rehm LP, Siegal AW. Social and cognitive correlates of depression in children: developmental perspective. *J Abnorm Child Psychol* 1984; **12:** 605–20.
18 Marton P, Connolly J, Kutcher S, Korenblum M. Cognitive social skills and social self-appraisal in depressed adolescents. *J Am Acad Child Adolesc Psychiatry* 1993; **32:** 739–44.
19 Reynolds WM, Coats KI. A comparison of cognitive behavior therapy and relaxation training for the treatment of depression in adolescents. *J Consult Clin Psychol* 1986; **54:** 653–60.
20 Stark KD, Reynolds WM, Kaslow NJ. A comparison of the relative efficacy of self control therapy and a behavioural problem solving therapy for depression in children. *J Abnorm Child Psychol* 1987; **15:** 91–113.
21 Lewinsohn PM, Clarke GN, Hops H, Andrews J. Cognitive behaviour treatment for depressed adolescents. *Behaviour Therapy* 1990; **21:** 385–401.
22 Hollon SD. Cognitive-behavioral therapy. *Current Opinion in Psychiatry* 1993; **6:** 348–52.
23 Prins PJM. Self-speech and self-regulation of high- and low-anxious children in the dental situation: an interview study. *Behav Res Ther* 1985; **23:** 641–50.
24 Kendall PC, Chansky TE. Considering cognitions in anxiety disordered children. *Journal of Anxiety Disorders* 1991; **5:** 167–85.
25 Kendall PC, Chansky TE, Kane M, *et al. Anxiety disorders in youth: cognitive-behavioral interventions.* Needham, MA: Allyn and Bacon, 1992.
26 Schachar R. Childhood hyperactivity. *J Child Psychol Psychiatry* 1991; **32:** 155–91.
27 Douglas VI, Barr RG, Amin K, O'Neill ME, Britton BG. Dosage effects and individual responsivity to methylphenidate in attention-deficit disorder. *J Child Psychol Psychiatry* 1988; **29:** 453–75.
28 Hindshaw SP, Erhardt D. Attention-deficit hyperactivity disorder. In: Kendall PC, ed. *Child and adolescent therapy: cognitive-behavioural procedures.* New York: Guilford Press, 1991: 98–130.
29 Whalen CK. Attention-deficit hyperactivity disorder. In: Ollendick TH, Hersen M, eds. *Handbook of child psychopathology.* 2nd Ed. New York: Plenum Press, 1989: 131–69.
30 Kendall PC, Braswell L. Cognitive-behavioral self-control therapy for children: a component analysis. *J Consult Clin Psychol* 1982; **50:** 672–90.
31 Abikoff H. An evaluation of cognitive behavior therapy for hyperactive children. In: Lahey BB, Kazdin AE, eds. *Advances in clinical child psychology.* Vol 10. New York: Plenum Press, 1987: 171–216.
32 Robins LN. *Deviant children grown up.* Baltimore: Williams and Wilkins, 1966.
33 Robins LN, Price RK. Adult disorders predicted by childhood conduct problems: results from the NIMH epidemiological catchment area project. *Psychiatry* 1991; **54:** 116–32.
34 Garrison ST, Stolberg AL. Modification of anger in children by affective imagery training. *J Abnorm Child Psychol* 1983; **11:** 115–30.
35 Lochman JE, White KJ, Wayland KK. Cognitive-behavioral assessment and treatment with aggressive children. In: Kendall PC, ed. *Child and adolescent therapy: cognitive-behavioral procedures.* New York: Guilford Press, 1991: 25–65.
36 Kazdin AE, Bass D, Siegal TC, Thomas C. Cognitive-behavioral therapy and relationship therapy in the treatment of children referred for antisocial behavior. *J Consult Clin Psychol* 1989; **57:** 522–35.
37 Kazdin AE, Siegal TC, Bass D. Cognitive problem-solving skills training and parent management training in the treatment of antisocial behavior in children. *J Consult Clin Psychol* 1992; **60:** 733–47.
38 Garner DM, Bemis KM. A cognitive-behavioral approach to anorexia nervosa. *Cognitive Therapy and Research* 1982; **6:** 123–50.
39 Garner DM, Bemis KM. Cognitive therapy for anorexia nervosa. In: Garner DM, Gardinkel PE, eds. *Handbook of psychotherapy for anorexia nervosa and bulimia.* 2nd Ed. London: Guilford Press, 1985: 107–46.
40 Fairburn CG. Cognitive-behavioural treatment for bulimia. In: Garner DM, Garfinkel PF, eds. *Handbook of psychotherapy for anorexia nervosa and bulimia.* 2nd Ed. London: Guilford Press, 1985: 160–92.
41 Kendall PC. Cognitive-behavioral therapies with youth: guiding theory, current status, and emerging developments. *J Consult Clin Psychol* 1993; **61:** 235–47.